**Vocabulary – Bundle 3 ~ Atoms**

|  |  |  |  |
| --- | --- | --- | --- |
| **Assurance Words** | **Definition/Synonym/Antonym** | **Example** | **Non-example** |
| **periodicity** | n. The repetition of similar properties in chemical elements, as indicated by their positioning in the periodic table; characteristic of the periodic table. The table is organized into grids of horizontal rows called periods and rows. Elements in the same group have similar chemical and physical properties. The table demonstrates *periodicity* because as you move from period to period the pattern of similar properties repeats itself.  **syn:** cyclicity, uniformity  **ant:** irregularity | Example: Atomic sizes increase as you go down the elements of each group. As you go across a period, the atomic sizes generally decrease. |  |
| **electron configuration** | n. the arrangement of electrons in an atom, which is prescribed by three rules: the Aufbau principle, the Pauli exclusion principle, and Hund’s rule syn: placement of electrons | === | |

|  |  |  |  |
| --- | --- | --- | --- |
| **ground state** | n. the lowest allowable energy state of an atom  **ant:** excited state | Note that the *ground state* is NOT the excited state | The electron is no longer bound to the nucleus of the atom and is considered **ionized.** |

|  |  |  |  |
| --- | --- | --- | --- |
| **Tier 3 Words** | **Definition/Synonym/Antonym** | **Example** | **Non-example** |
| **matter** | n. a physical substance that has mass and takes up space; it can be a gas, a liquid, a solid, or plasma; It is made up of particles called molecules and atoms.  **syn:** physical substance  **ant:** energy |  |  |
| **element** | n. the smallest possible substance that cannot be broken down further; elements are determined by the number of protons they possess |  |  |
| **energy field** | n. in physics, an energy field, is a way to picture the effects that electric charges have on one another. The proton’s positive charge and the electron’s negative charge create a "field" in the empty space around it. An electron inserted at any place in this energy field is pulled towards the positive charge; a proton inserted in the same place is pushed away  **syn:** force field |  |  |
| **Tier 2 Words** | **Definition/Synonym/Antonym** | **Example** | **Non-example** |
| **Periodic Table** | n. the arrangement of chemical elements according to their weight and chemical properties |  |  |
| **orbit** | v. to move around something in a circular path  **ant:** non-orbital |  |  |
| **determine** | v. to decide firmly; to be the cause of  **syn:** confirm, establish  **ant:** doubt, hesitate | **2+2=4** |  |
| **ultimately** | adv. the end result  **syn:** in the end, finally  **ant:** firstly |  |  |
| **significantly** | adv. in an important way; to a large degree  **syn:** importantly, very, especially  **ant:** insignificantly | The wind significantly influences how fast fire spreads. |  |